

Weekly Report

Yuxin Ma

06.20.2016 - 06.26.2016

This week I focused on the implementation of the visual SVM project.

Projects

Visual SVM Project

- **Interactions in the Linear Projection View** As the current method is not quite intuitive, this week I read several papers including [1, 2, 3] to find out a better method for interactions in the linear projection view. I am implementing the method described in [1] to provide an interaction feature first, and then I will consider improving it based on the tasks in this project.
- **Data** This week I was processing the USPS dataset in order to create a set of local SVM models for the exploration tasks. It will take another day to import it in the database. Additionally the current implementation does not support visualizing multiple models in the views so I am manipulating the codes for it.

Plan for the Next Week

- Continue implementing the remaining features;
- Propose another view for presenting topological relations of the models.

References

- [1] D. J. Lehmann and H. Theisel, “Orthographic star coordinates,” *IEEE Transactions on Visualization and Computer Graphics*, vol. 19, no. 12, pp. 2615–2624, 2013.
- [2] D. J. Lehmann and H. Theisel, “Optimal Sets of Projections of High-Dimensional Data,” *IEEE Transactions on Visualization and Computer Graphics*, vol. 22, no. 1, pp. 609–618, 2016.
- [3] S. Liu, P. Bremer, J. J. Jayaraman, B. Wang, B. Summa, and V. Pascucci, “The Grassmannian Atlas : A General Framework for Exploring Linear Projections of High-Dimensional Data,” *Computer Graphics Forum*, vol. 35, no. 3, 2016.